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WELLS ST. JOHN, P.S.

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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
12972-BSERIAL NO.
10731,109LIST OF ART CITED BY APPLICANT
(Use several sheets if necessary)APPLICANT
Tad A. Wierpy et al.FILING DATE
December 10, 2003CLASS/P
NO. 1626

U.S. PATENT DOCUMENTS

* Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Applicable
13	AM	4,800,227	01-1989	Matson			
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AB							
	AN							
	AO							
	AP							
	AQ							

OTHER REFERENCES (including Author, Title, Date, Periodic Page, Etc.)

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EXAMINER

DATE CONSIDERED

2/9/06

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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 13872-B	SERIAL NO. 10/731,108
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)		APPLICANT Todd A. Werry et al.	
FILING DATE December 10, 2003		GROUP 1626 1626	

U.S. PATENT DOCUMENTS							
Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
	AA	4,904,804	02-1990	Matson			
	AB	6,429,316 B1	08-2002	Takahashi et al.			
	AC	6,350,883 B1	02-2002	Chen et al.			
	AD	6,348,601 B2	02-2002	Ohlbach et al.			
	AE	6,075,153	06-2000	Bergfeld et al.			
	AF	6,248,902 B1	06-2001	Bertola			
	AG	6,008,375	12-1999	Bergfeld et al.			
	AH	5,912,358	06-1999	Frohn et al.			
	AI	5,847,213	12-1998	Karusu et al.			
	AJ	5,536,849	07-1996	Bergfeld et al.			
	AK	5,508,396	04-1996	Sieffen			
	AL	5,478,950	12-1995	Bergfeld et al.			

FOREIGN PATENT DOCUMENTS							
Document Number	Date	Country	Class	Subclass	Translation		
					Yes	No	
AM	JP63027476	02-1988	Japan (abstract only)		x		
AN	EP0027022	04-1981	EPO				
AO	WO 02/102772 A1	12-2002	PCT				
AP							
AQ							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
	AR	Nghiem et al., "An integrated process for the production of chemicals from biologically derived succinic acid", ACS Symposium Series, 2001, vol 748, pgs. 160-173. (abstract only)
	AS	Subba Rao et al., "Synthesis of five-membered heterocycles over modified ZSM-5 catalysis", Catalysis: Modern Trends, December 1994, pgs. 110-113. (abstract only)
	AT	Miyajima, "Manufacturing process for N-methyl pyrrolidone", Chem. Econ. Eng. Rev., 1971, vol 3(10), pgs. 29-31. (abstract only)(Year is sufficiently early so that the month is not in issue)

EXAMINER 	DATE CONSIDERED 7/9/06
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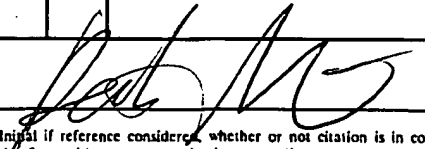
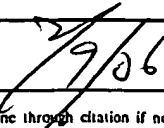
U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
<i>B</i>	AA	5,401,856	03-1995	Grey et al.			
	AB	5,347,021	09-1994	Taylor et al.			
	AC	5,338,861	08-1994	Botta et al.			
	AD	5,276,165	01-1994	Weyer et al.			
	AE	5,106,730	04-1992	Van Ness et al.			
	AF	5,101,044	03-1992	Schuster et al.			
	AG	4,885,371	12-1989	Tracy et al.			
	AH	4,420,620	12-1983	Murib			
	AI	4,404,391	09-1983	Meyer et al.			
	AJ	4,356,124	10-1982	Pesa et al.			
	AK	3,080,377	03-1963	Liao			
	<i>Δ</i>	AL	3,092,638	06-1963	Liao et al.		

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
<i>AS</i>	AM	CN1104635	07-1995	CHI (abstract only)			x	
	AN	CN1173492	02-1998	CHI (abstract only)			x	
	AO							
	AP							
	AO							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)			
<i>B</i>	AR		Castiglioni et al., "Gamma-Butyrolactone for production of solvents with low environmental impact". Chimica e l'Industria (Milan), 1996, vol 78(5), pgs. 575-581. (abstract only)(Year is sufficiently early so that the month is not in issue)
<i>I</i>	AS		Ershler et al., "Electroreduction of N-methylsuccinimide to N-methylpyrrolidone". Elektrokimiya, 1979, vol 15(4), pgs. 520-526. (abstract only)(Year is sufficiently early so that the month is not in issue)
<i>Δ</i>	AT		Yu et al., "Production and application of N-methyl-2-pyrrolidone". Henan Huagong, 1999, vol 7, pgs. 10-12. (abstract only)(Year is sufficiently early so that the month is not in issue)

EXAMINER <i>[Signature]</i>	DATE CONSIDERED <i>7/9/08</i>
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U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
94	AA	4,152,331	05-1979	Meijer et al.			
	AB	4,151,171	04-1979	Kurkov			
	AC	4,012,418	03-1977	Schaafsma et al.			
	AD	3,966,763	06-1976	Greene			
	AE	3,884,936	05-1975	Hollstein			
	AF	3,775,431	11-1973	Rodewald			
	AG	3,767,644	10-1973	Fukuoka et al.			
	AH	3,661,894	05-1972	Wehner et al.			
	AI	3,637,743	01-1972	Prince			
	AJ	3,634,346	01-1972	McKeon et al.			
	AK	3,109,005	10-1963	Lidov			
	AL	2,674,602	04-1954	Schuster			
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
13	AM	CS146054	11-1972	Czech (abstract only)			x
	AN	CS191496	07-1979	Czech (abstract only)			x
	AO	CS212181	02-1982	Czech (abstract only)			x
	AP	DE2025172	01-1971	Germany (abstract only)			x
	AQ	DE2165643	07-1972	Germany (abstract only)			x
OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)							
13	AR		Takahata et al., "N-Alkylation of lactams with phase transfer catalyst", Heterocycles, 1979, vol 12(11), pgs. 1449-1451. (abstract only)(Year is sufficiently early so that the month is not in issue)				
13	AS		Auerbach et al., "N-Methylation of amides, lactams, and ureas", Journal Org. Chem., 1976, vol 41(4), pgs. 725-726. (abstract only)(Year is sufficiently early so that the month is not in issue)				
13	AT		Subba Rao et al., "Modified ZSM-5 Catalysts for the Synthesis of Five and Six-Membered Heterocyclic Compounds", Journal of Organic Chemistry, 1994, vol 59(14), pgs. 3998-4000. (abstract only)(Year is sufficiently early so that the month is not in issue)				
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U.S. PATENT DOCUMENTS							
*Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
K B	AA	2,267,757	12-1941	Schuster et al.			
	AB	3,198,808	08-1963	Walldorf et al.			

FOREIGN PATENT DOCUMENTS							
*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
K B	AC	DE3701297	07-1988	Germany (abstract only)			x
	AD	DE19626123	01-1998	Germany (abstract only)			x
	AE	EP632030	01-1993	EPO (abstract only)			x
	AF	EP1201652	05-2002	EPO (abstract only)			x
	AG	JP42023344	11-1967	Japan (abstract only)			x
	AH	JP47021420	06-1972	Japan (abstract only)			x
	AI	JP47018751	05-1972	Japan (abstract only)			x
	AJ	JP47027975	10-1972	Japan (abstract only)			x
	AK	JP49000259	01-1974	Japan (abstract only)			x
	AL	JP49020582	05-1974	Japan (abstract only)			x
	AM	JP49020585	05-1974	Japan (abstract only)			x
	AN	JP49020586	05-1974	Japan (abstract only)			x
	AO	JP49048432	12-1974	Japan (abstract only)			x
	AP	JP51016657	02-1976	Japan (abstract only)			x
	AQ	JP51042107	11-1976	Japan (abstract only)			x
	AR	JP62120360	06-1987	Japan (abstract only)			x
	AS	JP01186863	07-1989	Japan (abstract only)			x
	AT	JP01186864	07-1989	Japan (abstract only)			x
	AU	JP01190667	07-1989	Japan (abstract only)			x
	AV	JP03081261	04-1991	Japan (abstract only)			x
AW	JP10158238	06-1998	Japan (abstract only)			x	

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
K B	AX	Kukalenko et al., "New synthesis of N-aryl and N-alkylpyrrolidones, and some of their properties", Khim. Geterotsikl. Soedin., 1971, vol 7(6), pgs. 773-774. (abstract only)(Year is sufficiently early so that the month is not in issue)
	AY	Anonymous, "Process for the isomerization of 4-methylamino-2-buten-1-ol to N-methylpyrrolidinone", Research Disclosure, 1993. (abstract only)(Year is sufficiently early so that the month is not in issue)
	AZ	Sojka et al., "Problems in preparation of 2-pyrrolidinone and N-methylpyrrolidinone", Ropa a Uhlie, 1985, pgs. 400-410. (abstract only)(Year is sufficiently early so that the month is not in issue)

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PS	AA	3,448,118	Chichery et al.					
FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
PS	AB	JP11349566	12-1999	Japan (abstract only)			x	
	AC	JP2001002638	01-2001	Japan (abstract only)			x	
	AD	JP2001002640	01-2001	Japan (abstract only)			x	
	AE	JP2001114760	04-2001	Japan (abstract only)			x	
	AF	JP2001302626	10-2001	Japan (abstract only)			x	
	AG	JP2001354646	12-2001	Japan (abstract only)			x	
	AH	JP2001354647	12-2001	Japan (abstract only)			x	
	AI	JP2000256312	09-2000	Japan (abstract only)			x	
	AJ	RO96953	05-1989	Romania (abstract only)			x	
	AK	RO111189	07-1996	Romania (abstract only)			x	
	AL	RO113640	09-1998	Romania (abstract only)			x	
	AM	SU259889	12-1969	Russia (abstract only)			x	
	AN	SU619484	08-1978	Russia (abstract only)			x	
	AO	SU1558903	04-1990	Russia (abstract only)			x	
	AP	SU1735283	05-1992	Russia (abstract only)			x	
PS	AQ	SU1735284	05-1992	Russia (abstract only)			x	
	AR	WO2001030755	05-2001	WO (abstract only)			x	
OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)								
PS	AS		Xue et al., "Studies on N-methyl-alpha-pyrrolidone synthesis", Shanghai Huagong, 1996, pgs. 10-14. (abstract only)(Year is sufficiently early so that the month is not in issue)					
	AT		Qiu et al., "Synthesis of N-methyl-2-pyrrolidone in vapor phase in the presence of catalysts" Shiyong Huagong, 1996, pgs. 179-182. (abstract only)(Year is sufficiently early so that the month is not in issue)					
PS	AU		Yan, "Preparation of 1-methyl-2-pyrrolidone by electrochemical method", Tianranqi Huagong, 2000, pgs. 44-46. (abstract only)(Year is sufficiently early so that the month is not in issue)					
	AV		Yano, "N-methyl-2-pyrrolidone". Yuki Gosei Kagaku Kyokaiishi, 1983, pgs. 880-881. (abstract only)(Year is sufficiently early so that the month is not in issue)					
PS	AW		Cen et al., "N-alkylation of amides, imides, and lactams under phase-transfer catalysis", Zhongguo Yiyao Gongye Zazhi, 1990, pgs. 218-220. (abstract only)(Year is sufficiently early so that the month is not in issue)					
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ms	AA	3,581,387	08-1972	Hollstein et al.					
	AB	3,812,148	05-1974	Hollstein et al.					
	AC	4,263,175	04-1981	Pesa et al.					
	AD	4,731,454	03-1988	Onake et al.					
	AE	4,780,547	10-1988	zur Hausen et al.					
	AF	4,814,464	03-1989	Olsen					
	AG	4,841,069	06-1989	Olsen					
	AH	5,101,045	03-1992	Koehler et al.					
	AI	5,157,127	10-1992	Weyer et al.					
	AJ	5,434,273	07-1995	Weyer et al.					
	AK	4,851,546	07-1999	Graham et al.					
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FOREIGN PATENT DOCUMENTS									
		Document Number	Date	Country	Class	Subclass	Translation		
ms	AM	WO 03/051868 A1	26.06.2003	PCT			Yes	No	
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	AP								
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ms	AR		Cerveny et al. CAS ABSTRACT 125:141930, (1996), 61(5), 764-769						
	AS		Stamboljyska et al., "IR spectra and structure of 2,5-pyrrolidinedione (succinimide) and of its nitration: experimental and ab initio MO studies", Journal of Molecular Structure 516 (2000), pp. 237-245.						
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